

**Claims:**

1           1.    A gateway system for triggering the monitoring of  
2   data packets that form a communication in a data packet  
3   network, comprising:

4           a storage device for storing computer instructions for  
5   generating and transmitting data packets having a select  
6   header, which select header includes communication monitoring  
7   parameters;

8           a network port for receiving and transmitting the data  
9   packets; and

10          a processor coupled to communicate with the storage  
11   device and coupled to the output port wherein the processor  
12   generates the data packets with the select header and then  
13   transmits them through the network port.

1           2.    The gateway system of claim 1 wherein the select  
2   header includes address information of a remote node  
3   containing monitoring equipment.

1           3.    The gateway system of claim 1 wherein the select  
2   header includes an indication of the type of monitoring that  
3   is take place.

1           4.    The gateway system of claim 3 wherein the type is  
2   signaling information only.

1           5.    The gateway system of claim 3 wherein the type is  
2   payload information only.

1           6.    The gateway system of claim 1 wherein the select  
2   header includes a header stripping parameter that defines, at  
3   least partially, when a communication monitoring header is to  
4   be stripped from the data packet.

1           7.    The gateway system of claim 1 wherein the select  
2   header is appended to the original data\_packet to cause the  
3   original data packet to be transmitted to a specified  
4   external node containing monitoring equipment.

1           8.    The gateway system of claim 1 wherein the select  
2   header is appended to a duplicate of the original data packet  
3   to cause the duplicate data packet to be transmitted to a  
4   specified external node containing monitoring equipment.

1           9. A method in a gateway device to a data packet  
2 network for triggering communication monitoring for a  
3 plurality of data packets that form a communication, the  
4 method comprising:

5           determining whether a data packet is part of a  
6 communication that is to be monitored;

7           appending a communication monitoring system (CMS) header  
8 to the data packet; and

9           routing the data packet with the appended (CMS) header  
10 to a node containing monitoring equipment.

1           10. The method of claim 9 wherein the determining step  
2 includes determining whether a source of the data packet is  
3 one that is to be monitored.

1           11. The method of claim 9 wherein the determining step  
2 includes determining whether a destination of the data packet  
3 is one that is to be monitored.

1           12. The method of claim 9 further including the step of  
2 determining whether payload information is to be monitored in  
3 addition to monitoring signaling information.

1           13. The method of claim 9 further comprising the step  
2 of duplicating the data packet and adding the CMS header to  
3 only one of the original or duplicate data packets.

1        14. The method of claim 9 wherein the CMS header  
2 includes an address of a node containing monitoring  
3 equipment.

1        15. The method of claim 9 wherein the CMS header  
2 includes an indication of the type of monitoring that is to  
3 occur.

1        16. The method of claim 9 wherein the CMS header  
2 includes a header stripping parameter.

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1        17. A method for routing data packets in a data packet  
2 network, comprising:

3        determining that an original data packet is part of a  
4 communication that is to be monitored;

5        duplicating the original data packet and forwarding one  
6 of the original and the duplicated data packets to a node  
7 containing monitoring equipment; and

8        forwarding the other of the original and the duplicated  
9 data packets to a specified destination.

1        18. The method of claim 17 wherein the method is  
2 performed in a gateway device.

1        19. The method of claim 17 wherein the method is  
2 performed in a portal to the data packet network.

1        20. The method of claim 17 wherein the one of the  
2 original and duplicated data packets that is forwarded to the  
3 node containing monitoring equipment is modified to including  
4 monitoring parameters within a header.